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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/680,721	10/06/2000	Frederick Browne Gregg	64908	2099

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EXAMINER

RUDDOCK, ULA CORINNA

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/680,721	GREGG ET AL.	
	Examiner	Art Unit	
	Ula C Ruddock	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 17,18,20-28 and 54-64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 17,18,20-28 and 54-64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Examiner has carefully considered Applicant's amendment and accompanying remarks filed August 13, 2003. The objection to the abstract has been overcome.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 17, 18, 20, 21, 25, 26, and 61-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over P.E. Dinkel (US 3,284,980) in view of Huege et al. (US 6,395,205). Dinkel discloses a hydraulic cement panel with low density core and fire reinforced high density surface layers. The panel is formed with a core of lightweight aggregate and Portland cement and is covered on each of the two principal surfaces with a skin membrane of glass fiber mesh (col 2, ln 61-66). The mesh layer is typically coated with a vinyl resin (col 3, ln 13-45). The core is cellular in nature (col 3, ln 71-75 to col 4, ln 1-2), which the Examiner is equating it to the aerated concrete core of the present invention. The core has a weight of 40 to 70 pounds per cubic foot (col 4, ln 7-8) and the panel can have a thickness of from 1/4 inch to 1 inch (col 6, ln 50-51). According to Figure 1, the panel is generally rectangular as required by the present invention and inherently has opposing side edges and a pair of opposing end edges. Dinkel fails to disclose that the aerated concrete is autoclaved.

Huege et al. (US 6,395,205) disclose that the production of autoclaved aerated concrete is well-established (col 1, ln 22-23). The concrete is placed in an autoclave to build strength, rigidity, and durability (col 1, ln 34-36). It would have been obvious to one having ordinary skill in the art at

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the time the invention was made to have used Huege's autoclaving method on the cellular concrete of Dinkel, motivated by the desire to obtain concrete having increased strength, rigidity, and durability.

Rejection is maintained.

4. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dinkel (US 3,284,980) and Huege et al. (US 6,395,205), as set forth above, in view of Lawlis et al. (US 4,065,333). Dinkel and Huege et al. disclose the claimed invention except for the teaching that the surface has beveled portions. Lawlis et al. disclose a wallboard having side edges each having a flat portion and also a beveled portion adjacent the front face (col 1, ln 67-68 to col 2, ln 1). It would have been obvious to have beveled the edges of the surface of Dinkel and Huege et al. as taught by Lawlis et al. motivated by the desire to obtain a panel that results in ease of handling and installation.

Rejection is maintained.

5. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dinkel (US 3,284,980) and Huege et al. (US 6,395,205), as set forth above, in view of Green et al. (US 5,552,187). Dinkel and Huege et al. (US 6,395,205) disclose the claimed invention except for the teaching that the moisture-resistant resin face layer extends around the opposing side edges. Green et al. disclose a coated fibrous mat-faced gypsum board that has coating applied to the surface of the fibrous mat which is sufficient to embed the mat completely in the coating (col 10, ln 1-4). It should be noted that the Examiner is equating Green's disclosure of the coating completely embedding the fibrous mat to Applicant's disclosure that the resin face layer extends around the

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opposing side edges because by completely embedding the fibrous mat with a coating, the side edges of the fibrous mat would be embedded as well. Therefore, it would have been obvious to one having ordinary skill in the art to have used Green's method of completely embedding the fibrous mat (i.e. extending the face layer around the opposing edges) on the panel of Dinkel and Huege et al., motivated by the desire to obtain a panel that is completely protected from moisture and deterioration.

Rejection is maintained.

6. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dinkel (US 3,284,980) and Huege et al. (US 6,395,205), as set forth above, in view of Ensminger et al. (US 5,221,386). Dinkel and Huege et al. disclose the claimed invention except for the teaching that the opposing end edges of the core are exposed. Ensminger et al. disclose a cement board having reinforced edges. Ensminger et al. disclose cutting away the mat from the border regions of the upper composite web (col 3, ln 3-5), which the Examiner is equating to the disclosure by the present invention of opposing end edges of the core being exposed. It would have been obvious to one having ordinary skill in the art to cut away the mat from the border regions of the upper composite web as taught by Ensminger et al. on the panel of Dinkel and Huege et al. motivated by the desire to improve adhesive bonding between the core and the moisture-resistant material.

Rejection is maintained.

7. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dinkel (US 3,284,980) and Huege et al. (US 6,395,205), as set forth above, in view of Restrepo (US 4,407,676). Dinkel and Huege et al. disclose the claimed invention except for the teaching that the

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core further comprises reinforcing fibers in the aerated concrete. Restrepo discloses fiber-reinforced cement. The lightweight concrete is known as aerated concrete (col 3, ln 22-24).

Plastic fibers are used to reinforce the cementitious matrix (col 4, ln 17-20). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the reinforcing plastic fibers of Restrepo in the core of Dinkel and Huege et al., motivated by the desire to obtain a concrete core with increased resistance to tensile loads and impact loading.

Rejection is maintained.

8. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dinkel (US 3,284,980) and Huege et al. (US 6,395,205), as set forth above, in view of King (US 5,002,620). Dinkel and Huege et al. disclose the claimed invention except for the teaching that the core comprises first and second portions aligned in end-to-end relation at respective opposing edges thereof and that an adhesive layer joins the opposing edges of the first and second portions together. King discloses fiber-reinforced cellular concrete. The finished sheets of concrete are then cut to a desired length and the lightweight fractions from opposed sheets are bonded together in sandwich form. A suitable resin is disposed between the opposed lightweight fractions (col 4, ln 12-21). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used King's method of bonding the finished opposed sheets with a suitable resin on the panel of Dinkel and Huege et al., motivated by the desire to obtain a panel that can be easily manufactured and transported.

Rejection is maintained.

Response to Arguments

9. Applicant's arguments filed August 13, 2003, have been fully considered but they are not persuasive for the reasons set forth. Applicant argues that the Dinkel patent does not disclose a resin layer incorporating the fiber mesh as claimed. This argument is not persuasive because Dinkel's mesh is coated with a vinyl resin. It should be noted that Applicant has failed to define "incorporating" and thus, the Examiner has interpreted it to read on a coating or an impregnation. As a result, Dinkel's coated mesh has been equated to Applicant's resin layer incorporating the fiber mesh. Applicant also argues that there is not discussion of using a core of autoclaved aerated concrete. This argument is also not persuasive because Dinkel's concreted is cellular, which is the same as being aerated. Furthermore, the Examiner has combined Dinkel with Huege et al. for its teaching of autoclaving concrete. Applicant again argues that there is no teaching of a moisture resistant resin layer incorporating the fibers therein. As shown above, because Applicant has failed to define "incorporating", the Examiner has interpreted it to read on a coating or an impregnation. As a result, Dinkel's coated mesh has been equated to Applicant's resin layer incorporating the fiber mesh.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the

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THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ula C Ruddock whose telephone number is 703-305-0066. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

UCR

UCR

Ula Ruddock